

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:
a scanning means for scanning a photosensitive
body using a plurality of semiconductor lasers to form
5 a latent image; and

a latent image forming means for pulse-width-
modulating a drive signal of the semiconductor lasers
in accordance with a write position of the latent
image, when exposure is performed such that one of
10 beams from the plurality of semiconductor lasers is
partially overlapped with a beam adjacent to one of the
beams from the plurality of semiconductor lasers on the
photosensitive body.

2. An image forming apparatus according to claim
15 1, wherein the latent image forming means does not
pulse-width-modulate the drive signal, when at least
two of the plurality of semiconductor lasers are
simultaneously turned on in one scanning, and

20 the latent image forming means pulse-width-
modulates the drive signal, when one of the beams from
the plurality of semiconductor lasers which are turned
on in one scanning is adjacent to one of the beams from
the plurality of semiconductor lasers which are turned
25 on in the next scanning.

~~3. An image forming apparatus according to claim~~

09887119-062504

Sub
A2
(contd)

1, wherein the latent image forming means does not pulse-width-modulate the drive signal, when at least two of the plurality of semiconductor lasers are simultaneously turned on in one scanning, and

5 the latent image forming means pulse-width-modulates the drive signal, when one of the plurality of semiconductor lasers is turned on in one scanning.

09887119-062501

10 4. An image forming method for scanning the photosensitive body using a plurality of semiconductor lasers to form a latent image, comprising the step of:
 forming a latent image by modulating a drive signal of the semiconductor lasers by PWM in accordance with a write position of the latent image, when
15 exposure is performed such that one of the beams from the plurality of semiconductor lasers is partially overlapped with an adjacent beam of one of the beams from the plurality of semiconductor lasers on the photosensitive body.

20

Sub
A2

5. An image forming method according to claim 4, wherein, in the latent image forming step, the drive signal is not modulated by PWM when at least two of the plurality of semiconductor lasers are simultaneously
25 turned on in one scanning but modulated by PWM when one of the beams from the plurality of semiconductor lasers which are turned on in one scanning is adjacent to one

of the beams from the plurality of semiconductor lasers which are turned on in the next scanning.

6. An image forming method according to claim 1, wherein, in the latent image forming step, the image signal is not modulated by PWM when at least two of the plurality of semiconductor lasers are simultaneously turned on in one scanning but modulated by PWM when only one of the plurality of semiconductor lasers is turned on in one scanning.

7. An image forming apparatus comprising:
a plurality of emitting means for emitting a plurality of light beams;
scanning means for scanning the plurality of light beams emitted from the plurality of emitting means on a common photosensitive body;
modulating means for modulating the plurality of light beams in accordance with respective image data;
detecting means for detecting a plurality of image pixels which are adjacent to each other in a sub-scanning direction and exposed in different main scanning directions, in accordance with the image data; and
exposure intensity control means for controlling the exposure intensity of the light beams on the basis of the image data, at least one of the plurality of image pixels detected by the detecting means, in response to a detection signal.

25 exposure intensity control means for relatively decreasing an exposure intensity of the light beams for at least one of the plurality of image pixels detected by the detecting means, in response to a detection

[illegible]

Sub
12
(concl)

~~result of the detecting means.~~

8. An image forming apparatus according to claim
7, wherein the exposure intensity control means
5 controls an exposure time of the light beams for
recording one pixel.

9. An image forming apparatus according to claim
8, wherein the exposure intensity control means causes
10 the modulating means to pulse-width-modulate.

10. An image forming apparatus according to claim
9, wherein the exposure intensity control means
controls the modulating means such that a pulse width
15 to a pixel detected by the detecting means is shorter
than that to a pixel which is not detected by the
detecting means.

11. An image forming apparatus according to claim
20 10, wherein the exposure intensity control means
controls the modulating means such that the pulse width
to the pixel detected by the detecting means is shorter
than 100 % and the pulse width to the other pixel is
100 %.

12. An image forming apparatus according to claim
7, wherein the detecting means has means for storing

09887119-062501

Sub
43

Sub
A3
(cont'd)

~~image data of at least one main scanning~~

13. An image forming apparatus according to claim
7, wherein exposure is performed such that adjacent
5 pixels are partially overlapped with each other.

14. An image forming apparatus according to claim
7, wherein the light beam is a laser beam.

10 15. An image forming apparatus comprising:
a plurality of emitting means for emitting a
plurality of light beams;
scanning means for scanning the plurality of light
beams emitted from the plurality of emitting means on a
15 common photosensitive body;
modulating means for modulating the plurality of
light beams in accordance with respective image data;
detecting means for detecting a plurality of image
pixels which are adjacent to each other in a sub
20 scanning direction and exposed in the common main
scanning, in accordance with the image data; and
exposure intensity control means for relatively
increasing an exposure intensity of the light beams for
at least one of the plurality of image pixels detected
25 by the detecting means, in response to a detection
result of the detecting means.

Sub
A4
FOIA b7 - D5290

16. An image forming apparatus according to claim 15, wherein the exposure intensity control means controls an exposure time of the light beams for recording one pixel.

5

17. An image forming apparatus according to claim 16, wherein the exposure intensity control means causes the modulating means to pulse-width modulate.

10

18. An image forming apparatus according to claim 17, wherein the exposure intensity control means controls the modulating means such that a pulse width to a pixel detected by the detecting means is shorter than that to a pixel which is not detected by the detecting means.

15

19. An image forming apparatus according to claim 18, wherein the exposure intensity control means controls the modulating means such that the pulse width to the pixel which is detected by the detecting means is 100 % and the pulse width to the pixel which is not detected by the detecting means is shorter than 100 %.

20

20. An image forming apparatus according to claim 15, wherein the detecting means has means for storing image data of at least one main scanning.

25

09887119-062501

Sub
A5

21. An image forming apparatus according to claim 15, wherein exposure is performed such that adjacent pixels are partially overlapped with each other.

5 22. An image forming apparatus according to claim 15, wherein the light beam is a laser beam.

23. An image forming method comprising:
an emitting step of emitting a plurality of light
10 beams;
a scanning step of scanning the plurality of light beams to be emitted on a common photosensitive body;
a modulating step of modulating the plurality of light beams in accordance with respective image data;
15 a detecting step of detecting a plurality of image pixels which are adjacent to each other in a sub scanning direction and exposed in different main scanings, in accordance with the image data; and
an exposure intensity control step of relatively
20 decreasing an exposure intensity of the light beams for at least one of the plurality of image pixels detected by the detecting step, in response to a detection result of the detecting step.

24. An image forming method comprising:
an emitting step of emitting a plurality of light
beams;

501-06290-0000

a scanning step of scanning the plurality of light beams to be emitted on a common photosensitive body;

a modulating step of modulating the plurality of light beams in accordance with respective image data;

5 a detecting step of detecting a plurality of image pixels which are adjacent to each other in a sub scanning direction and exposed in the common main scanning, in accordance with the image data; and

10 an exposure intensity control step of relatively increasing an exposure intensity of the light beams for at least one of the plurality of image pixels detected by the detecting step, in response to a detection result of the detecting step.

Sub
A6
(Cont'd)

09887119 052501

ADD
A7